

REMARKS

A RCE and Petition and payment for an Extension of Time are submitted concurrently herewith.

Review and reconsideration on the merits are requested.

Claims 1, 3 and 18-22 were rejected under 35 U.S.C. § 112, first paragraph. The Examiner considered that the specification as originally filed does not provide written description support relating to preparation of two or more photographic reagents as claimed in claims 1 and 22. The Examiner also considered that the specification fails to provide written description support for the step of measuring the amount of photographic reagent transferred to the measuring tank as claimed in claims 1 and 22, the language relating to the photographic reagent as claimed in claim 18, the different additive as claimed in claim 20 and the sensitizing dye as claimed in claim 21.

The Examiner was further of the view that the measuring and transfer steps described at page 10 of the specification relate to a silver halide emulsion, and that this passage therefore does not support claims which more broadly encompass reagents other than silver halide emulsion.

In response, claim 1 has been amended to clarify that the invention is directed to a method for liquid preparation of reagents that require heat-melting prior to use, the method including the steps of (i) transferring, (ii) measuring and (iii) heat-melting, and repeating steps (i) to (iii) for each additional batch of liquid photographic reagent to be prepared. Claims 18, 20 and 21 have been canceled.

The specification at page 3, lines 21-26, reproduced below, sets forth the claimed method, including the steps of transferring, measuring and heat-melting, which steps are repeated for every liquid preparation. This passage is reproduced below as follows.

In order to achieve the above-mentioned objects, the present invention is directed to a method for liquid preparation of photographic reagent comprising at least a process of measuring the photographic reagent in a process of heat-melting the photographic reagent, the method comprising the steps of: transferring, with a pump, the photographic reagent to be measured to a measuring tank via piping without being heated; heating the photographic reagent to be melted after measuring; and repeating the steps for every liquid preparation.

Likewise, the specification at page 4, lines 2-5 shows that at the time of the filing of the application, Applicants had possession of an invention including repeating steps (i) to (iii) for each batch of liquid to be prepared. This passage is reproduced below, as follows:

According to the present invention, for every liquid preparation, a series of the processes are repeated wherein photographic reagents are transferred by a pump via a piping without being heated to a measuring tank, measured, and undergo heat-melting after being measured.

See also the passage at page 4, lines 7-9, reproduced below.

Since a series of processes of liquid transfer, measuring, and heat-melt are repeated for every liquid preparation, that is, this is a batch-wise method, it becomes easy to deal with the loss and mutual contamination of reagents.

The specification at page 10, lines 24-30 emphasizes that such batch-wise method for liquid preparation, in which a series of processes of liquid transfer, measuring, and heat-melting are repeated for every liquid preparation allows mutual contamination to be suppressed.

The specification bridging pages 10-12 describes that the invention is applicable not only to a silver halide emulsion as a photographic reagent, but also to any photographic reagent which

requires the prevention of the time elapse in melt, and the loss and mutual contamination of reagents in liquid preparation.

The description at page 10, lines 18-19 of the specification (the silver halide emulsion transferred into the measuring tank 96 is measured with the load cell 106 and melting by heating with the jacket 94 while be stirred by the stirring 95) describes a preferred embodiment of the invention, and should not be understood as limiting the invention. That is, as noted at page 63, lines 9-12, there is no intention to limit the invention to the specific forms disclosed. Rather, the description of the preferred embodiments is just that, a description of a preferred embodiment used for illustrating and understanding of the invention.

In view of the above remarks, including specific passages noted in the specification as originally filed, it is respectfully submitted that the amended claims fully comply with the written description requirement of 35 U.S.C. § 112, first paragraph, and withdrawal of the foregoing rejection is respectfully requested.

Claims 1, 3 and 18-22 were rejected under 35 U.S.C. § 112, second paragraph. The Examiner considered the scope of "photographic reagent" to be indefinite, noting that the claims encompass any reagent useful in forming a photographic material.

Applicants reply as follows.

The method of the present invention does not relate to any and all photographic reagents as suggested by the Examiner, but only those that "require heat-melting prior to use". That is, the present claims define a specific class of photographic reagents which are subject to the steps of transferring, measuring and heat-melting.

Thus, one of ordinary skill can readily identify those photographic reagents covered by the method of the present invention. Namely, photographic reagents that require heat-melting prior to use constitute a material to be worked on by the claimed method, whereas a photographic reagent that does not require heat-melting prior to use is outside the scope of the claimed method. A silver halide emulsion is just one example of a photographic reagent that requires heat-melting prior to use. This is not an unpredictable situation requiring a number of examples to support generic claims. Here, Applicants should be allowed to claim their invention as broadly as the prior art permits.

Claims 1 and 19-21 were rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent 5,385,812 to Bagchi et al. In paragraph 7 at pages 4-5 of the Office Action, claims 3 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bagchi et al, further in view of U.S. Patent 5,264,024 to Bosvot et al.

The Examiner cited Fig. 3 of Bagchi et al as meeting the terms of claims 1 and 19-21, including measuring and melting of gelatin and other photographic reagents. Although acknowledging that Bagchi may not disclose the "measuring" step, the Examiner considered that the tank taught by Bagchi et al would serve a similar function such that the rejected claims are either anticipated or obvious.

Bosvot et al was cited as disclosing a process of melting silver halide emulsion. The reason for rejection was that it would have been obvious to use the process of Bagchi et al to

melt silver halide emulsion as taught by Bosvot et al with a reasonable expectation of achieving a useful coating composition.

Applicants traverse, and respectfully request the Examiner to reconsider for the following reasons.

The present invention is directed to a method for preparation of a photographic reagent which is to be heated prior to use. A characteristic feature thereof lies in the time sequence at which the photographic reagent is heated and melted in transferring to a measuring tank via piping with a pump. That is, in the present invention, the photographic reagent is transferred, with a pump, to a measuring tank via piping without being heated. The used amount is measured while transferring, and the photographic reagent is heated and melted after measuring. Because the photographic reagent is transferred in the piping in an unheated state, e.g., a gel-state, the photographic reagent is not heated/melted prior to transferring with the pump or in the midstream of the piping. As such, the residual amount of photographic reagent in the piping is decreased as compared to the case of flowing in the piping in a liquid state.

Even when there is residual photographic reagent, by heating and melting the photographic reagent after transferring via piping as required by the present claims, the residual photographic reagent can be substantially completely evacuated by blowing air into the piping or reversing the pump. This provides an advantage in that mutual contamination of different kinds of material does not readily occur even when the liquid preparation batch is switched to a different reagent. Additionally, reagent loss in the piping can be reduced, and deterioration in the quality of the reagent in the piping can be prevented.

In response to the Amendment filed April 8, 2005, although acknowledging that the prior art does not disclose the step of transferring a photothermographic reagent to a measuring tank without being heated and after measuring, the Examiner considered that such modification would have been obvious. According to the Examiner, (i) "the photographic reagent taught in the jackets and not via the piping" and (ii) the photographic reagent and the gelatin and water are brought to the tank with a measured amount through lines 16, 48 and 65 of Bagchi et al without being heated. The Examiner further reasoned that using the piping or other means to bring the photographic reagent in the jacket would be obvious.

However, as noted in the Remarks portion of the Amendment filed April 8, 2005, all reagents in Fig. 3 of Bagchi et al are heat-melted prior to being transferred, and that claim 1 differs from Fig. 3 of Bagchi et al in that Bagchi et al does not disclose a measuring tank as required by claim 1. Applicants further noted that in Bagchi et al, the relative amounts of MPS and heat-melted gelatin are measured by flow meters 62 and 68. Thus, Bagchi fails to disclose (and there is nothing in the prior art to suggest) the claimed step of measuring the amount of photographic reagent transferred to the measuring tank. For the same reasons, Bagchi et al also fails to disclose the step of heat-melting the photographic reagent after measuring. Notably, in Bagchi et al, all photographic reagents are heat-melted prior to measuring, by flow meter or otherwise.

Surely, dry or moist gelatin is added to gelatin tank 82 through manhole 48 as shown in Fig. 3 of Bagchi et al (column 5, lines 61-65). Thus, this passage of Bagchi et al teaches transferring a photographic reagent without being heated. However, Fig. 3 and the subject

passage of Bagchi et al does not teach transferring the gelatin to a measuring tank as required by step (i) of present claim 1 (i.e., there is nothing in Bagchi et al which indicates that gelatin tank 82 is capable of being used as a measuring tank); does not disclose measuring the amount of gelatin transferred to a measuring tank as required by step (ii); and does not disclose heat-melting the gelatin after measuring as required by step (iii). Rather, the amount of gelatin delivered to mixing chamber 34 and into jacketed tank 70 is measured by flow meter 68 after the gelatin has been heat-melted.

With respect to the rejection of claim 3, Bosvot et al discloses heat-melting a silver halide emulsion, but does not otherwise cure the deficiencies of Bagchi et al. For example, Bosvot et al teaches heat-melting a silver halide emulsion in melting device 5, but there is no disclosure of transferring to a measuring tank without being heated, or measuring the amount of photographic reagent transferred to the measuring tank and then heat-melting after measuring the photographic reagent.

For the above reasons, it is respectfully submitted that the present claims are patentable over Bagchi et al alone or in view of Bosvot et al, and withdrawal of the foregoing rejections is respectfully requested.

Withdrawal of all rejections and allowance of claims 1, 3, 19 and 23 is earnestly solicited.

In the event that the Examiner believes that it may be helpful to advance the prosecution of this application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Application No. 10/775,099

Q79674

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Respectfully submitted,



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